



# **PRODUCTION CHEMICALS**

Production Enhancement, redefined.

#### Drilling - Acidizing - Fracturing - Workover - Production - Offshore

# THE JI Y CAL

#### YOU NEED TO MAKE





Jet Well Solutions, Inc. PO Box 989 Aledo, Texas 76008

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| Acids                            | JET Well Solutions provides a network of commodity acids and synthetic hydrochloric acid / hydroflouric acid replacement systems.   | Page 4 |
| Biocides                         | JET Well Solutions carries the most competitive, capable and compatible biocides on the market. We distribute field-proven technology, with quality assurance.                      | Page 5 |
| Corrosion Inhibitors             | Series of oil and water soluble formulations; <b>JET-CI</b> series are specially engineered chemicals that control corrosion and neutralize hazardous acid gas.                     | Page 6 |
| COMBO Corrosion/Scale Inhibitors | Specially formulated <b>COMBO</b> products are ideal cost effective solutions. We have carefully designed for compatibility within various well applications and fluids.            | Page 6 |
| Defoamers                        | Oil and/or water defoaming agents; <b>JET-DF</b> are applied within stimulation, downhole and surface applications.   | Page 7 |
| Emulsion Breakers                | Designed to break oil in water emulsion, <b>JET-EB</b> series are specifically formulated per basin and bottle tested in the lab for water drop, water clarity and clean interface. | Page 7 |
| Foamers                          | <b>JET-FM</b> products are designed for deliquidification in low-pressure gas wells. Premium formulations include scale and/or corrosion prevention.                                | Page 7 |
| Paraffin Reducers                | Series of up-front economical <b>JETSOLV</b> solvents and value added <b>PARAJET</b> dispersants, inhibitors and pour point depressants for flow assurance.                         | Page 8 |
| Pump Flush                       | <b>JETFLUSH</b> is an environmentally friendly BTEX free cleaner, replacement for diesel. Used to flush hoses, lines and equipment.   | Page 9 |
| Scale Inhibitors                 | Series of scale inhibition products, <b>JETGUARD</b> provides prevention of scale deposits through squeeze or continuous injection. Also available for waterflood and SWD.          | Page 9 |
| Scavengers                       | <b>JET H2S</b> & <b>JET-OS</b> are a series of oil and water soluble formulations designed for tower or continuous injection scavenge applications.                                 | Page 9 |

## CHEMICALS & SERVICE

Maximize returns through up front cost savings and produciton enhancement.

Our product service includes consultation costs which identify the root cause factor of inefficiency. Once the issue has been singled out, we provide a detailed application support system that typically is complimented by an up front cost savings.



For additional information, including product and safety data sheets:

Email: info@jetwellsolutions.com



| PRODUCT      | PRODUCT DESCRIPTION  | CHEMISTRY                                      |
|--------------|--|--|
| ACIDS        |  |  |
| HCL 10       | Most economical HCL inorganic acid blend used to break down fluids with a vigorous rx rate.  | 7.5% Hydrochloric Acid                         |
| HCL 15       | Recommended HCL inorganic acid blend used to break down fluids with a vigorous rx rate.  | 15% Hydrochloric Acid                          |
| HCL 22       | Low-dosage HCL inorganic acid blend used to break down fluids with a vigorous rx rate.   | 22% Hydrochloric Acid                          |
| HCL 28       | Most concentrated HCL inorganic acid blend used to break down fluids with a vigorous rx rate.  | 28% Hydrochloric Acid                          |
| JET-AB 40    | Mud acid containing ammonium biflouride as a striong inorganic acid with vigorous rx rate.   | Hydroflouric Acid / Hydrochloric<br>Acid Blend |
| JET-HCLR 150 | Environmentally friendly & non-toxic alternative to 15% HCL acid. Additionally, effective against scale and mineral buildup within production wells.               | Proprietary Blend                              |
| JET-HCLR 300 | Fully biodegradeable, environmentally friendly & non-toxic alternative to HCL/HF acids. Dissolves acid soluble materials & surface equipment with lasting effects. | Proprietary Blend                              |
| PlexJET A80  | Economical, winterized organic acid formula dissolves deposits such as asphaltene & paraffin. Effective in high temp wells or as general alternative to HCL/HF.    | 80% Acetic Acid / Solvent Blend                |

# STIMULATE & PRODUCE

Anti-sludge and reduction techniques help maximize produciton.

Whether during the initial drilling, frac or post-production well phase, Jet Well Solutions specializes in microfracture stimulation through a systemized acid approach. Preventing damage is vital to our entire process. Ask about speicifc system applicable to your well formation, including a green alternative solution.





| PRODUCT            | PRODUCT DESCRIPTION  | CHEMISTRY                               |
|--------------------|--|---|
| BIOCIDES           |  |   |
| AMA®-324           | Caustic-based, broad spectrum biocide releases thiocynates and carbamates for slow kill, degrades at higher temperatures.  | 24% Dazomet                             |
| AQUCAR™ 714        | Water treating biocide used as a fast-acting anti-microbial agent. Ideal for aerobes, bacteria, SRB and APB, algae and yeasts. Miscible with water & easily dispersed.   | 14% Glutaraldehyde / 2.5% Quat<br>Blend |
| AQUCAR™ GA 15      | Water treating biocide used as a fast-acting application against aerobes, SRB's and APB's. Consumed by FeS. For lower temperature conditions.                            | 15% Glutaraldehyde                      |
| AQUCAR™ GA 25      | Water treating biocide used as a fast-acting application against aerobes, SRB's and APB's. Consumed by FeS. For lower temperature conditions.                            | 25% Glutaraldehyde                      |
| AQUCAR™ GA 50      | Water treating biocide used as a fast-acting application against aerobes, SRB's and APB's. Consumed by FeS. For lower temperature conditions.                            | 50% Glutaraldehyde                      |
| AQUCAR™ DB 20      | Water treating micro-biocide used as a fast-acting broad spectrum control of bacteria, fungi, yeast and algae. Rapid decomposition.                                      | 20% DBNPA                               |
| AQUCAR™ DB 100     | Fast-acting, non-oxidizing biocide. Environmentally favorable solid concentrate. used as a fast-acting broad spectrum control of bacteria, fungi, yeast and algae.       | 100% DBNPA                              |
| AQUCAR™ PS 20      | Broad spectrum biocide inhibits growth of algae, bacteria, yeast and fungi. Apply in acid and alkaline environments, particularly vs sulfate-reducing bacteria (SRB).    | 20% THPS                                |
| AQUCAR™ PS 50      | Broad spectrum biocide inhibits growth of algae, bacteria, yeats and fungi. Apply in acid and alkaline environments, particularly vs sulfate-reducing bacteria (SRB).    | 50% THPS                                |
| AQUCAR™ THPS 75    | Micro-biocide concentrate of AQUCAR™ PS 20 and AQUCAR™ PS 50 containing 76.5% tetrakis (hydroxymethyl) phosphonium sulfate. Also effective in iron sulfate.              | 75% THPS                                |
| B2512              | Water treating biocide used as a fast-acting anti-microbial agent. Ideal for aerobes, bacteria, SRB and APB, algae and yeasts. Miscible with water & easily dispersed.   | 25% Glutaraldehyde / 12% Quat<br>Blend  |
| Barquat™ MB-50 WTM | Non-chloride based brine used as a higher density fluid. Additionally reduces treating pressures within the well.  | 50% Benzalkonium Chloride               |
| Bellacide® 300     | Synergistic, non-oxidizing biocide and bio dispersant, possessing both bactericidal and algacide properties.   | 2.5% TTPC / 2.5% Quat                   |
| Dantogard™ 2000    | Winterized, non-haz solution for anionic, cationic and nonionic fluid applications. Used as both quick and extended kill biocide/preservative within multi-stage frac.   | 66% DMDM Hydantoin                      |
| Vantocil™ IB       | Fast acting micro-biocide inhibits bacteria, yeast & mold. Effective preservative for nonionic & cationic fracs containing emulsion polymers & other rheology modifiers. | 20% Polyaminopropyl Biguanide           |

### OILFIELD USE APPROVED

Successfully control or eradicate microbial growth and prevent the build up of biofilms.

Microbial growth causes different problems and requires different treatment philosophies. Jet Well Solutions entails a full range diversity of North American approved, complimentary biocide products for the specific issues present in the anaerobic environment of your well.



| PRODUCT  | PRODUCT DESCRIPTION  | CHEMISTRY                                  |  |
|--|--|--|--|
| CORROSION INHIBITORS                               | CORROSION INHIBITORS   |  |  |
| JET-CI-4760  | Highly concentrated and specifically designed to provide both corrososion protection and lubrication to high strength wirelines steel.                                     | Fatty Amine Salts / Lubricant Oil<br>Blend |  |
| JET-CI-4770W                                       | Oil-soluble with non-emulsifying properties and freeze-protection. Film persistency in sweet & sour fluids; combats H2S, CO2 and organic acids corrosion.                  | Imidazoline                                |  |
| JET-CI-4779  | Oil soluble, fresh water disperible corrosion inhibitor, provides excellent film persistency in sweet & sour fluids; combats H2S, CO2 and organic acids corrosion.         | Quaternary Amines / Surfactant<br>Blend    |  |
| JET-CI-4830  | Water soluble, for sour and high water/oil ratio wells sustainable within downhole flowline applications. Designed for batch or continuous application.                    | Quaternary Amines / Surfactant<br>Blend    |  |
| COMBINATION PRODUCTS: CORROSION / SCALE INHIBITORS |  |  |  |
| JET-SC-305   | Water soluble, scale preventive & corrosion inhibitor, controls corrosion caused by H2S, CO2, organic/inorganic acids within produced, injection waters & waterfloods.     | Proprietary Blend                          |  |
| JET-SC-306   | Oil soluble, slightly water dispersible corrrosion/scale combo designed to form an oil-wet film. Excellent protection in sour and sweet oil wells for extreme conditions.  | Organic Phosphonate Blend                  |  |
| JET-SC-307   | Water dispersible corrosion inhibitor with chelating agent to additionally prevent scale deposits within mild issue wells.   | Organic Phosphonate Blend                  |  |
| JET-SC-308   | Water dispersible corrosion inhibitor with chelating agent to additionally prevent scale deposits within mild issue wells that includes freezing waters.                   | Quat / Phosphonate Blend                   |  |
| JET-SC-309   | Water dispersible & slightly oil dispersible corrosion inhibitor with chelating agent, additionally prevents scale deposits of mild issue wells, includes freezing waters. | Quat / Phosphonate Ester Blend             |  |

### CUSTOM FORMULATIONS

Have or desire a formula different than what we advertsie?

- We have the ability to obtain raw materials and custom blend your preffered formulation from a network of supply chain partners throughout North America.





| PRODUCT           | PRODUCT DESCRIPTION  | CHEMISTRY  |
|-------------------|--|--|
| DEFOAMERS         |  |  |
| JET-DF-3855       | Oil soluble formulation incorporates surface-active anti-foaming agents effective in treating crude oil foaming, gas well condensate and drilling returns.   | Proprietary Blend  |
| EMULSION BREAKERS |  |  |
| JET-EB-301        |  | Specially formulated compounds based on complex resin adducts, sulfonates, esters and ethers |
| JET-EB-302        | Demulsification can be accomplished by mechanical or chemical means, or by a combination of these. The JET-EB series are specialty chemicals designed to favorably alter the forces that maintain stable water-in-oil emulsions.                     |  |
| JET-EB-303        |  |  |
| JET-EB-304        | Many variables affect the performance of emulsion breakers therefore; a large number of special formulations are necessary. Our formulations are designed for  |  |
| JET-EB-305        | variable crude oil/water mixtures. Product selection is determined by a series of lab bottle testing at various treating ratios. A specific treating recommendation can be made only after a complete evaluation of the system has been carried out. |  |
| JET-EB-306        |  |  |
| JET-EB-307        |  |  |
| FOAMERS           |  |  |
| JET-FM-100        | Economical fresh water winterized foamer, designed for compatiblility within diesel-based fluids.  | Alcohol Base   |
| JET-FM-101        | Multi-applicable foamer for acidizing, frac & produciton. Displays strong tolerance twithin diesel while compatible with both anionic and cationic fluids.   | Alcohol Base   |
| JET-FM-102        | Oil-tolerant foamer designed for use within low-salinity (50,000 mg/l chloride) waters of drilling, frac & clean-out workover operations.  | Alcohol Base   |
| JET-FM-320        | Foaming agent for deliquidification in low-pressure gas wells. Ideal as a continuous injection, working within the formation for low-dosage application.   | Amphoteric Base  |
| JET-FM-520W       | Winterized, oil-tolerant foamer compatible in crudes, produced water. storage tanks & gas vapors. Contains non-wetting characteristic in closed mud systems.   | Amphoteric Base  |
| JET-FM-C47W       | COMBO foamer & corrosion inhibitor, formulated with a cationic surfactant for use in foam fracs and unloading gas wells particularly when carbon dioxide is present.   | Amphoteric Base / Surfactant<br>Blend  |
| JET-FM-CS30       | Three-in-one COMBO, foamer-corrosion/scale inhibitor for stabilizing liquid foam, combating carbon dioxide & acid attack corrosions and calcium carbonate scale.   | Proprietary Blend  |

# EVALUATION

Derisked solutions for the benefit of your bottom-line.

- We provide detailed lab reports specific to your well through extensive testing procedures. We maintain a library of field proven

chemistries to assist in the final chemistry.



| PRODUCT                   | PRODUCT DESCRIPTION   | CHEMISTRY  |
|---------------------------|---|--|
| PARAFFIN REDUCERS         |   |  |
| DISPERSANTS & SOLVENTS    | Surfactants used either in solvent treatments of pre-existing deposits or in continuo crystallites suspended within the solvent and/or crude and flushed out of the syste |  |
| JETSOLV 50                | Concentrated mutual solvent providing solubility of many solids, strong cleanup benefits within sandstones and cleaner emulsion breaks within carbonate.                  | Mutual Solvent   |
| JETSOLV 91                | Cost effective solvent blend containing toluene, xylene, tri and tetra methylbenzenes and other alkyl benzene derivatives.  | Aromatic Solvent Blend                                   |
| PARAJET 99                | Oil-soluble surfactant/solvent blend combines for dispersant function with solvents, as a low-cost alternative of preventive and pre-existing paraffin buildup.           | Surfactant / Solvent Blend                               |
| PARAJET 100               | Highly concentrated, blend of aromatic solvents prevents the buildup of solids such as paraffin, asphaltene and other inorganic solids.                                   | Aromatic Solvent Blend                                   |
| PARAJET 201               | All natural solvent blend replaces hot oiling by effectively dissolving paraffinic solids into the crude oil while passing cleanly through flowlines.                     | Proprietary Blend  |
| PARAJET ASP+              | BTEX free specifically designed to mitigate solids with greater than 15% asphaltene content. Dissolves the solids into crude through flowlines, replaces hot oiling.      | Proprietary Blend  |
| INHIBITORS                | Oil-soluble polymers that work on a molecular level, reduce the temperature of apprinhibiting the formation of paraffinic deposits.                                       | pearance of the cloud-point,                             |
| PARAJET EB21              | Specialty blend wax crystal modifier; containing a paraffin inhibitor, desalting compounds and emulsion breaker. Effectively separates dissolved solids/crude.            | Blend of: Resin Adducts, Sulfonates,<br>Esters, & Ethers |
| POUR POINT<br>DEPRESSANTS | Used to limit wax gelling, usually induced by cold temperature exposure, by interfer and keeping the bulk fluid mobile.   | ing with the crystallization process                     |
| PARAJET PPD21             | Versatile pour point depressant dramatically lowers the temperature of paraffinic crude oils, reducing frictional pressure and avoiding plugging of equipment.            | Polymeric WCM / Solvent Blend                            |

### FLOW ASSURANCE

We understand solid issues at a molecular level.

- Paraffins are just a percentage of solid content buildup within production wells. Various molecular types of paraffin, asphaltenes and other inorganics make up the entirety of the wells producing solids. Jet Well Solutions has developed the lab procedure to identify actual percentage of these deposits, effectively itemizing a function and solution through a customized product-application system.

Replace hot oiling costs and increase production with our customized PARAJET application system.





| PRODUCT          | PRODUCT DESCRIPTION  | CHEMISTRY                                   |
|------------------|--|---|
| PUMP FLUSH       |  |   |
| JETFLUSH         | Environmentally friendly BTEX free cleaner, designed as a replacement for diesel used to flush hoses, lines and equipment. Product is sustainable to freezing temps.   | Nonionic Surfactant Blend                   |
| SCALE INHIBITORS |  |   |
| JETGUARD 250     | Solution for prevention of nucleation and the crystal growth process of calcium carbonate, calcium sulfate, strontium sulfates, barium sulfate scales and iron scales. | Phosphonate                                 |
| JETGUARD 300     | For use in converting calcium sulfate scales to acid-solution products. Contains surfactants to de-oil and penetrate scales faster and more efficient conversion.      | Phosphonate                                 |
| JETGUARD 305     | Acidic solution used to lower pH and assist frac gel hydration within boron-contaminated frac water or saline water. Loadings to be determined before field use.       | Phosphonate / Acid Blend                    |
| JETGUARD 310     | Water-soluble within a variety of oilfield waters. Used for the prevention of alkaline earth metal scales. Ideal for continuous injection application.                 | Acrylate Polymer / Phosphate Ester<br>Blend |
| JETGUARD 320     | Used for the prevention barium sulfate and other alkaline scales. Compatible with a variety of oilfield brines makes ideal for continuous injection applications.      | Phosphonate                                 |
| JETGUARD 325     | Used for prevention of barium sulfate and other alkaline scales wihtin low-temp wells. Lower dosage pumping rates for continuous injection applications.               | Phosphonate Ester                           |
| JETGUARD GC      | For use in converting calcium sulfate scales to acid-solution products. Contains surfactants to de-oil and penetrate scales faster and more efficient conversion.      | Amphoteric Base                             |
| SCAVENGERS       |  |   |
| JET-H2S-117      | Designed to be effective within the fluid system, both as an H2S converter for sweeting squeeze solutions and ironite sponge systems within batch.                     | Triazine Base                               |
| JET-H2S-312      | Highly concentrated for maximum effectiveness within fluid system. H2S converter for sweeting squeeze solutions and ironite sponge systems within batch.               | Triazine Base                               |
| JET-OS-401       | Versatile operation oxygen scavenger for fresh & salt waters prevents corrosion from dissolved oxygen. No need to pre-mix or create on the fly field version.          | Bisulfite Catalyst                          |

### OUR FOOTPRINT

#### Specialty locations throughout USA!

- We support each oil & gas shale play throughout the United States, We even export product for international application.

Each one of our locations has a specific function within our footprint, enabling our entire operations to be as efficient as possible for your needs.



